



The 2010 MSMR Student Competition – Essay, Poster or Video

Student Packet – Contest Explanation, Rules & Details

In the 2010 MSMR competition, you may submit an Essay, a Poster or a Video. You may submit only one entry, so select carefully.

The Challenge

- For the **2010 MSMR Student Competition**, you will create an essay, poster or video based on recent research at a New England biomedical research institution. You do not have to do the biomedical research yourself – your submission highlights a scientist’s research – but you do have to learn about it and present it in a compelling way that shows you really understand the research and its meaning.
- There are many ways to learn about new research discoveries, including science websites, blogs, journals, newspapers, magazines, news releases from research organizations, and your teachers, parents and friends. *To get you started, more specific suggestions are included below, on pages 8 and 9.*

Goal

- Your goal is to show that you understand the topic and can present it with originality, creativity, clarity and economy. Judging will be based on the quality of the information you provide, how well your submission exemplifies the actual biomedical research, and the power of your work. Create your entry so that we want to read or view it.

Prizes (in each Level)

Students

- 1st Place \$500
- 2nd Place \$250
- 3rd Place \$100
- HM – Certificate of Merit

Classroom Grants to Teachers

- 1st Place \$100
- 2nd Place \$50
- 3rd Place \$25

Rules

Deadline

- All Posters, Essays, Videos and Entry Forms for the 2010 Competition must be submitted between January 15, 2010 and April 19, 2010, inclusive.

Eligible Participants

- **New England** students in grades 7 - 8 (Level 1) or grades 9 - 12 (Level 2). Public, parochial, private/independent, charter, alternative or home-schooled students are eligible to enter.



Submission

- There should be nothing in the Essay, Poster or Video itself that identifies you or your school. Put *that* information in the accompanying Entry Form.
- Submit by e-mail only.
 - **Essay or Poster:** Attach your Essay (PDF only) or Poster (PDF only) plus your Entry Form and send your e-mail to 2010competition@MSMR.org. In the Subject line write your Level and category (e.g., "Level 1 - Poster"). In the body of the e-mail list your name, your telephone number, e-mail address, physical address, Entry title, and school name. Note: When you create your PDF, make sure your security settings allow copying and printing.
 - **Video:** You will be posting your Video on our YouTube account. Attach your Entry Form and your Bibliography and send your e-mail to 2010video@MSMR.org. In the Subject line write your Level and category (e.g., "Level 2 - Video"). In the body of the e-mail list your name, telephone number, e-mail address, physical address, Entry title, and school name. When we receive your entry, we will send you uploading instructions.
- *Read and follow the specific category details below on pages 4 through 7.*

The Entry Form

- The Entry Form is essential and it must be completed fully. You may have to do some research (e.g., local newspaper contact name and information). Assure that the Entry Form is attached to the same e-mail as your Entry. The Entry Form may be submitted as a text file (e.g., MSWord) or a PDF.

Notification of Winners and Awarding of Prizes

- Winning students and their teachers will be notified by June 7, 2010. We prefer to notify by e-mail, so accurate e-mail addresses for students and teachers are very helpful. For students who do not have unique e-mail addresses, please be sure that the phone can take a voice message.
- Winning students, their parents, and their teacher are invited to the MSMR Annual Meeting & Dinner where they will receive their awards. The Annual Meeting is in Waltham, MA on Thursday, June 17, 2009, 6:00 p.m. to 9:00 p.m.

A Model For Your Work

- See the next page for information about our **What A Year!** student science website (www.WhatAYear.org)



The What A Year! Student Science Website

Every month, **What A Year!** (www.WhatAYear.org) presents a story of a recent biomedical research breakthrough. Each story answers three questions:

1. What was the discovery?
2. How was it done and who did it?
3. Why is it important? (E.g., Does it give us a better understanding of living systems? Does it point to a new cure for a disease or a new way to treat an injury or condition?)

The 2010 Challenge

- **For this competition, find and report on a discovery, as if you were the What A Year! reporter.** Uncover a recent breakthrough that interests you and then create your Entry to answer these same three questions. Your submission must concisely and compellingly convey the information.

Some Points to Remember

- Really understand your topic. If you don't "get" it, you cannot present it successfully. Every teacher will tell you that the proof of knowing something is: Can you explain it clearly to another person?
- All submissions must be your original work. Use your own explanations, thoughts, words and examples. Make notes as you learn about your topic, and then construct your entry using your own words and examples. As with every research project, include references for all sources of information. A bibliography is required in this competition.
- Don't use obscure language; clearly explain uncommon technical terms. Imagine yourself presenting to your classmates, not to a group of scientists.
- Judges will be interested in content clarity and impact, so avoid complicated fonts, unclear graphics, odd special effects, and merely decorative clip art. Graphics, whether in a Poster, or illustrating a point in an Essay, or as part of a Video, should help to powerfully explain its content.
- Spelling and grammar count!

Specific requirements

Essay The Essay should be between 1,000 and 1,500 words, exclusive of the bibliography. Use a readable non-script font, 10- to 12-point size and double spacing. Make sure that the Heading appears on the first page and that subsequent pages are numbered.

More →



Check spelling, punctuation and grammar. Do not rely solely on spell-check software: many typos make actual words that would not be highlighted by a spell-checker. Also, computer grammar-checkers are helpful but can steer you wrong, so be sure to read over your work several times and get another person to review it, too.

The following elements are required in your Essay: these titles are for guidance only ... they need not be included in your Essay.

- **ESSAY HEADING** – The title of the Essay and the name(s) and affiliation(s) of the researcher(s). Your header probably won't be the same as the one published by the scientists in a technical journal; normally such titles use highly scientific words, and are not clear to the general public. If you found the news on a website, in a press release or in an article in a non-scientific publication, you will see that the title is more readily understandable than the published scientific one. Invent one like that for your submission.
- **ESSAY OVERVIEW** – Describe the research advance and its significance. Sometimes the researcher will have included that; a journalist or press officer writing about the discovery *always* will: in fact, it may be the lead item in the story.
- **ESSAY CORE** – Describe the authors' hypothesis, methods and results. This will probably be the largest part of the Essay. Give us enough detail so that we can envision how the research was carried out; was the hypothesis confirmed? Choose your details wisely: there is no need to identify, for example, the brand of lab equipment used, the dosing ranges for animal models, or other facts that a scientist would want, but that are not needed for the reader's understanding of the science.
- **ESSAY CONCLUSION** – Summarize the potential health benefits of the research (maybe years from now) to people and animals; or, explains the new level of understanding this gives us into how living bodies operate, and what that means for the future.
- **ESSAY BIBLIOGRAPHY*** – List the references you used, such as magazines and newspapers, websites, interviews, dictionaries, encyclopedias. Each school has a preferred bibliographic standard style: use the one your school endorses. For websites, give the website name as well as the page URL.

Poster On the next page is a schematic of a Poster. This is a sample only. It shows the Required Elements and *maximum* dimensions. Your Poster can be vertical or horizontal. Yours can be smaller or in a different height-to-width ratio. On page 6 there are more details about the Required Elements.

More →



**SCHEMATIC
(SAMPLE LAYOUT)**

Remember that this is a sample layout only ... it shows the required elements in **BLUE**. Your Poster should reflect your own design style.

The next page (6) has more details on the Required Elements.

We can accept only PDF files of your Poster. Please do not send other forms of graphics file. Note: The program you use to create your Poster *may* limit the actual Poster size. Plan carefully in advance.

36 inches (91.4 cm) maximum

HEADING
Title, author(s)/researcher(s), institutional affiliation(s)

PHOTO,
ILLUSTRATION
or
OTHER
GRAPHIC

OVERVIEW
Abstract describing the research advance

CORE

- Hypothesis
- Methods
- Results

TABLE,
GRAPH
or
CHART

IMPORTANCE
Summary of the importance of the work and its potential benefits or consequences

BIBLIOGRAPHY
List of references you used. Follow your school's standard bibliographic style

22 inches (55.9 cm) maximum

Page 5
MSMR • 73 Princeton Street • Suite 311, North Chelmsford, MA 01863
Tel. 978-251-1556 and on the Internet at www.MSMR.org and www.WhatAYear.org



The following Elements are required on your Poster: these titles are for guidance only ... they need not be included on your Poster. The use of photos, charts, tables, and other graphic tools that clarify the research is strongly encouraged.

- **POSTER HEADING** – The title of the Poster and the name(s) and affiliation(s) of the researcher(s). Your header probably won't be the same as the one published by the scientists in a technical journal; normally such titles use highly scientific words, and not very clear to the general public. If you found the news on a website, in a press release or in an article in a non-scientific publication, you will see that the title is more readily understandable than the published scientific one. Invent one like that for your Poster.
- **POSTER OVERVIEW** – Describe the nature of the research advance and its significance. Sometimes the researcher will have included that; a journalist or press officer writing about the discovery *always* will: in fact, it may be the lead item in the story.
- **POSTER CORE** – Describe the authors' hypothesis, methods and results. This will probably be the largest part of the Poster Give us enough detail so that we can envision how the research was carried out; was the hypothesis confirmed? Choose your details wisely: there is no need to identify, for example, the brand of lab equipment used, the dosing ranges for animal models, or other facts that a scientist would want, but that are not needed for the viewer's understanding of the science.
- **POSTER CONCLUSION** – Summarize the potential health benefits of the research (maybe years from now) to people and animals; or, explains the new level of understanding this gives us into how living bodies operate, and what that means for the future.
- **POSTER BIBLIOGRAPHY*** – List the references you used, such as magazines and newspapers, websites, interviews, dictionaries, encyclopedias. Each school has a preferred bibliographic standard style: use the one your school endorses. For websites, give the website name as well as the page URL. Title your bibliography as "Bibliography - <Poster Name>".

Video On the next page are required elements of the Video as well as technical requirements and restrictions. Do not make the Bibliography part of your Video; instead, attach it to your submission e-mail as a PDF document. All Videos are to be uploaded to our competition YouTube account, per the instructions on the next page.

More →



You have wide latitude in creating your Video, but it must include these elements (although you do not have to specifically label each section of the Video unless you want to). Remember, you are making a Video in order to take advantage of motion, sight and sound.

- **VIDEO DURATION** – The Video must be seven (7) minutes or less. Remember, longer is not necessarily better.
- **VIDEO HEADER** – The title of the Video and the name(s) and affiliation(s) of the researcher(s). Your header probably won't be the same as the one published by the scientists in a technical journal; normally such titles use highly scientific words, and are not clear to the general public. If you found the news on a website, in a press release or in an article in a non-scientific publication, you will see that the title is more readily understandable than the published scientific one. Invent one like that for your submission.
- **VIDEO OVERVIEW** – Describe the research advance and its significance. Sometimes the researcher will have included that; a journalist reporting about the discovery *always* will: in fact, it may be the lead item in the story.
- **VIDEO CORE** – Describe the researchers' hypothesis, methods and results. This will probably be the largest part of the Video. Give us enough detail so that we can envision how the research was carried out; was the hypothesis confirmed? Choose your details wisely: there is no need to identify, for example, the dosing ranges for animal models, or other facts that a scientist would want, but that are not needed for the viewers' understanding of the science.
- **VIDEO CONCLUSION** – Summarize the potential health benefits of the research (maybe years from now) to people and animals; or, explains the new level of understanding this gives us into how living bodies operate, and what that means for the future.
- **VIDEO BIBLIOGRAPHY*** – List the references you used, such as magazines and newspapers, websites, interviews, dictionaries, encyclopedias. Each school has a preferred bibliographic standard style: use the one your school endorses. For websites, give the website name as well as the page URL. Attach to your Entry e-mail. Title your bibliography as "Bibliography - <Video Name>"
- **VIDEO SUBMISSION** – When we receive your Entry e-mail, we will send you the instructions and settings for uploading to our Youtube™ account. Please follow them exactly.
- **TEAMS** – Teams of up to two (2) students may submit Videos. Each submitter must complete an individual Entry Form, check the "Team" box, and list the other team member's name.



Useful Links for Researching

What A Year! - monthly research stories – www.WhatAYear.org

Learn what **What A Year!** is all about, but don't use any of our stories for your own entry.

Organizations whose members conduct or sponsor research

These organizations' members include colleges, universities, hospitals, biotechnology firms, medical device firms, and pharmaceutical firms. Not every research facility is a member, so if you have a particular place in mind, go to its website and look in its News section. Note: If you have interest in a particular disease or condition (e.g., diabetes, colitis, cancer, heart disease, autism, malaria, depression, Alzheimer's, macular degeneration) find associations or organizations that focus on that condition and see what research they are sponsoring or reporting.

Connecticut United for Research Excellence (CURE) – www.curenet.org

New England Biotech Association – www.newenglandbiotech.org

Massachusetts Biotechnology Council – www.massbio.org

Massachusetts Medical Device Industry Council – www.MassMEDIC.com

New England Biotech Association – www.newenglandbiotech.org

Print and on-line publications

This list excludes subscription publications. Many libraries, especially college and university libraries, subscribe to scientific publications in the life sciences.

BioMed Central – www.biomedcentral.com

Over 100 open-access journals.

Bioresearch Online – www.bioresearchonline.com

Current Biotechnology News Shorts – www.bio-link.org/newslist.htm

DrugResearcher.com – www.drugresearcher.com

Breaking news in drug discovery research.

Frontiers in Biosciences – www.bioscience.org

A journal and virtual library.

Genetic Engineer News – www.genengnews.com

NanoBiotech News – www.nanobiotechnews.com

PubMed – www.ncbi.nlm.nih.gov/pubmed/

PubMed is the National Library of Medicine's search service: it provides access to over 15 million citations.

RNAi.net – www.rnai.net/news/default.aspx

Science Daily: Science News and Articles – www.sciencedaily.com

Science Functional Genomics Website – www.sciencegenomics.org



More Resources

Bioscan Directory –

<http://www.bioworld.com/servlet/com.accumedia.web.Dispatcher?next=bioScan>

Profiles of more than 2,000 biotechnology companies worldwide, including historical data, key personnel, pipelines, products on the market, and more.

CRISP – <http://crisp.cit.nih.gov/>

(Computer Retrieval and Information on Scientific Projects) A biomedical database system containing information on research projects and programs supported by the National Institutes of Health and other agencies within the Department of Health and Human Services.

EurekaAlert! – www.eurekaalert.org

Science headlines from the American Association for the Advancement of Science (AAAS).

The New York Times and *The Boston Globe* both report on science in their print and on-line editions. *The Boston Globe* pays particular attention to news releases and announcements from New England companies and institutions.

Winning Titles in Last Year's Competition

Level 1 (Grades 7 – 8)

- 1st – Adult Skin Cells to iPS Cells
- 2nd – Good Things Come in Small Packages
- 3rd – Using Stem Cells to Treat Spina Bifida
- Honorable Mention – Gold Nano Antennas Combat Cancer

Level 2 (Grades 9 – 12)

- 1st – Benefits of Genetic Targeting in Lung Cancer Therapy
- 2nd – Huntington's Disease - Snipping the Diseased Allele
- 3rd – Nanoparticles Provide Hope in Cancer Detection and Treatment
- Honorable Mention – Innovative Method Identifies Potential Treatment for Glioblastomas
- Honorable Mention – The Glucose Monitoring Tattoo

*A Word About Wikipedia

We love the Wikipedia website and have become absorbed for hours there, following link after link.

But please remember that as good as it is, Wikipedia should not be your primary reference. Get your information from first-hand sources, and always double-check what you read in any on-line reference site, especially those that allow anyone to edit an article.

